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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,391	12/30/2003	Adam Yeh	M61.12-0568	7557

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WESTMAN CHAMPLIN (MICROSOFT CORPORATION)
SUITE 1400
900 SECOND AVENUE SOUTH
MINNEAPOLIS, MN 55402-3319

EXAMINER	
FERRIS III, FRED O	
ART UNIT	**PAPER NUMBER**
2128	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/748,391	YEH ET AL.	
	Examiner	Art Unit	
	Fred Ferris	2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 December 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/27,7/3,9/6*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-26 have been presented for examination based on applicants' preliminary amendment filed 15 April 2004. Claims 1-26 stand rejected by the examiner.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed system features including a "dimensional model generation system", "data navigation system" "design component", and "runtime component" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are also objected to because as being informal and acceptable for examination purposes only. For example, Figures 5, and 18-40 contain hand written notations and are of poor quality and difficult to read. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Specifically, independent claims 1 and 15 include features relating to a dimensional model generation system, a data navigation system, a design component, and a runtime component, that do not appear to be explicitly disclosed in the specification. While the specification discloses a navigation service, model generator, and model service, for example, there does not appear to be a specific teaching of a dimensional model generation system, or a data navigation system. While the specification mentions a navigation service, model generator, and model service, for example, there does not appear to be a specific teaching of a dimensional model generation system, or a data navigation system. Dependent claims 9-14 and 21-26 further recite limitations relating to a "navigation provider" that do not appear to be explicitly disclosed in the specification. While the specification makes reference to a "provider manager" (page 55, line 7), there does not appear to be a clear and concise

teaching of a "navigation provider" as recited in the claims. For purposes of art rejections the examiner interprets the phrase to simply mean any client application acting as a metadata provider. Dependent claims inherit the defect of the claims from which they depend.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 15-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, independent claim 15 recites an "architecture supporting analytical processing". It is unclear from the language of the claims if applicants intend the claimed "architecture" to mean a system (i.e. an apparatus) or a method for realizing a system architecture. Since it appears that the claimed elements including a "design component" and "runtime component" are apparatus elements, the examiner has interpreted the claimed architecture to be a "system" architecture (i.e. an apparatus) for purposes of prior art rejections.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1-26 are rejected under 35 U.S.C. 101 because the claimed invention is drawn to non-statutory subject matter.

In the case of independent claims 1 and 15, all of the elements of the claimed "system" elements appear to simply be software (i.e. program) elements per se. (Fig. 5, for example) The Examiner maintains that the claims, as written, are drawn to nonstatutory descriptive material since the claimed apparatus appears to simply consist of software per se and does not appear to impart any functionality to the system hardware.

MPEP 2106 recites the following supporting rational for this reasoning:

"Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when **employed as a computer component**. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data. **Both types of "descriptive material" are nonstatutory when claimed as descriptive material per se.** Warmerdam, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is **recorded on some computer-readable medium** it becomes structurally and **functionally interrelated to the medium** and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized."

In this case, the claims simply include elements relating to the dimensional model, entity, and navigation generator (claim 1) that all appear to be software per se since they are simply disclosed as software modules that do not appear to impart any functionality with the system hardware. Further, the claimed architecture comprising a design component and runtime component (claim 15) similarly appears to simply be an apparatus consisting of only software per se. Dependent claims inherit the defects of the claims from which they depend.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 15-26 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 17-35 and 36-40 of copending Application No. 10/725,665. Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations and dependent elements of claims 15-26 of the present invention appear as a subset of the claimed limitations and combined elements of claims 17-35 and 36-40 of application 10/715,665.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 7,007,029 issued to Chen in view of US Patent 7,185,016 issued to Rasmussen.

Regarding independent claim 1: Chen teaches a dimensional model generation system (CL2-L15-50, Fig. 1a) inclusive of a dimensional model generation component (Fig. 2b) configured to receive as inputs object model description information describing relationship between entities (business data) in an object model (CL7-L30-47), identifying information in object model (CL15-L 1-57, Fig. 6) and mapping information between entities in object model (e.g. an entity generator representing a business data model, CL15-L57-CL16-L25, Fig. 6d), and a dimensional model generator configured to automatically generate a dimensional model based on inputs (CL5-L50-59, Fig. 1a, Figs. 5b, 5c).

Chen does not explicitly disclose a data navigation system creating paths from relationships or a runtime component identifying navigable paths. (although the examiner believes this feature to be inherent in the model generation system of Chen)

Analogous art Rasmussen also teaches a dimensional model (metadata) describing the relationship between business entities but more importantly explicitly discloses defining the navigation between levels in a metadata model (See functionally equivalent "drill relationship" CL36-L1-15, Figs. 38, 39) and navigation from subject entity to subject entity via paths. (CL38-L8-11, Fig. 40)

Hence a skilled artisan tasked with realizing a dimensional model generating system describing the relationship between business entities, and having access to the teachings of Chen and Rasmussen, would have knowingly modified the teachings of Chen with the teachings of Rasmussen in order to filter queries during navigation of the business model (See: Rasmussen CL38-L10).

Regarding independent claim 15: Chen teaches a design component for dimensional model generation system (CL2-L15-50, Fig. 1a) inclusive of a dimensional model generation component (Fig. 2b) configured to receive (business data) transactional objects (CL12-L17-25, CL14-L50, Figs. 5A, 6B) in an object model description (CL7-L30-47) including transactions, identifying information in object model (e.g. analytical, CL15-L 1-57, Fig. 6) and mapping information between entities in object model (e.g. an entity generator representing a business data model including transactions from analysis, CL15-L57-CL16-L25, Fig. 6d), and a dimensional model generator configured to automatically generate a dimensional model based on inputs (CL5-L50-59, Fig. 1a, Figs. 5b, 5c).

Chen does not explicitly disclose a data navigation system creating paths from relationships or a runtime component identifying navigable paths. (although the examiner believes this feature to be inherent in the model generation system of Chen)

Analogous art Rasmussen also teaches a dimensional model (metadata) describing the relationship between business entities but more importantly explicitly discloses defining the navigation between levels in a metadata model (See functionally equivalent "drill relationship", CL36-L1-15, Figs. 38, 39) and navigation from subject entity to subject entity via paths. (obviously including a runtime component, CL38-L8-11, Fig. 40)

Hence a skilled artisan tasked with realizing a dimensional model generating system describing the relationship between business entities, and having access to the teachings of Chen and Rasmussen, would have knowingly modified the teachings of Chen with the teachings of Rasmussen in order to filter queries during navigation of the business model (See: Rasmussen CL38-L10).

Per claims 2-3, 7, 18: Chen teaches transactional aggregated business data (CL12-L17-25, CL14-L50, Figs. 5A, 6B)

Per claims 4-5, 16, 17: Rasmussen teaches user based business data navigation paths through multiple models motivated as noted above (CL38-L8-11, Fig. 40).

Per claims 6, 8, 19, 20: object oriented translation to dimensional model (CL12-L17-25, CL14-L50, Figs. 5A, 6B) and dimensional model including focal point identification and of entities in a persistent data store (CL15-L1-57, Fig. 6, CL16-L25, Fig. 6D).

Per claims 9-14, and 21-26: While there is no clear definition of the term "navigation provider" as noted above under 112(1) rejections, Rasmussen teaches the configuring client applications as a metadata provider, which for purposes of art rejections, the examiner interprets as functionally equivalent to the claimed navigation providers of the present invention (CL11-L5-9).

Conclusion

8. The prior art made of record not relied upon is considered pertinent to applicant's disclosure, careful consideration should be given prior to applicant's response to this Office Action.

US Patent 6,609,123 issued to Cazemier et al teaches metadata model.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Ferris whose telephone number is 571-272-3778 and whose normal working hours are 8:30am to 5:00pm Monday to Friday. Any inquiry of a general nature relating to the status of this application should be directed to the group receptionist whose telephone number is 571-272-3700. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached at 571-272-2279. The Official Fax Number is: (571) 272 8300

Fred Ferris, Primary Examiner
Simulation and Emulation, Art Unit 2128
U.S. Patent and Trademark Office
Randolph Building, Room 5D19
401 Dulany Street
Alexandria, VA 22313
Phone: (571-272-3778)
Fred.Ferris@uspto.gov
March 16, 2007

FRED FERRIS
PRIMARY EXAMINER
TECHNOLOGY CENTER 2100